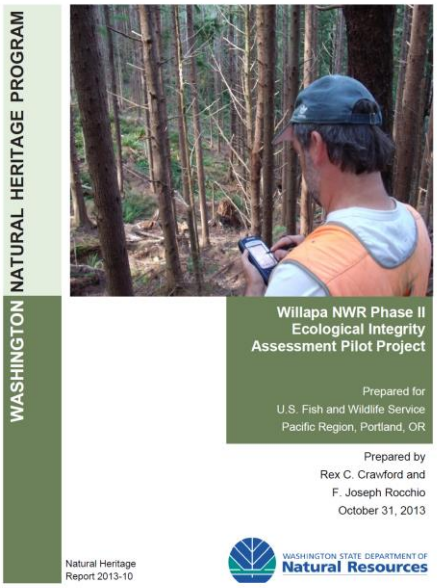
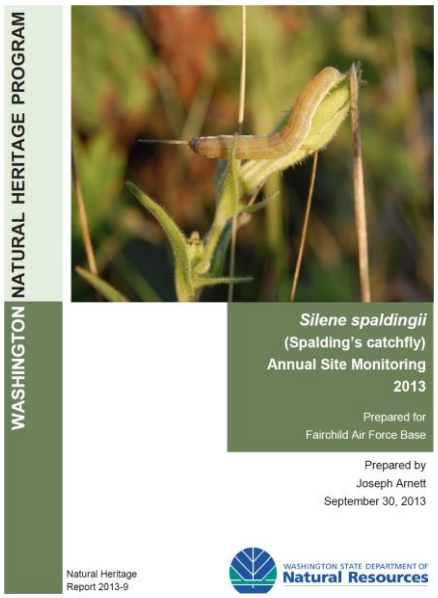
Natural Heritage Program
Report to the Natural Heritage Advisory Council
March 5, 2014

Much of the work conducted by the Natural Heritage Program during the last 6-12 months has been associated with projects that are at least partially externally funded. The program currently has 17 such projects that are active (13 funded by USFWS, 3 by EPA and 1 by BLM), with four new projects about to get underway (one each funded by USFWS, WDFW, NatureServe, and BLM). We also are in the negotiation stages for two additional projects, one with the USFS and one with the National Park Service. Work that we have either completed or spent significant time on during the last 6-12 months is summarized below.

Ecology

- Completed a project on the Willapa National Wildlife Refuge to classify and map the vegetation and to use Ecological Integrity Assessments (EIAs) to characterize the condition of the vegetation. Project completed.
- Currently entering and analyzing data for the EPA Phase 2 project. The overall project is geared toward improving the wetland data managed and distributed by WNHP, in particular as it relates to the Department of Ecology's wetland rating system. Phase 2 includes updating records in the NHP database for both western and eastern Washington. This project will be completed by June 30, 2014.
- Completed the first year of field work for EPA Phase 3, which focuses on eastern Washington wetlands. We are planning next season's field work and working with NatureServe to design a database to manage the EIA data that we generate.
- Provided ecosystem ranking information for the Puget Sound Partnership's Puget Sound Pressure Assessment; prioritized stressors for Lowland Depressional Wetlands, Lowland Slope Wetlands, and Riparian Vegetation.
- Provided consultation to DNR, State Parks and WDFW on management of priority ecosystems on their respective lands.



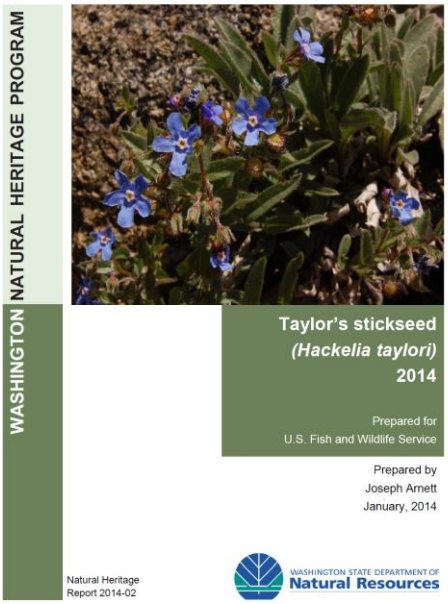


Botany

- Conducted monitoring of federally listed and candidate species, including participation in technical or recovery teams for the following: *Castilleja levisecta*, *Lupinus oreganus*, *Eriogonum codium*, *Physaria douglasii* ssp. *tuplashensis*, *Artemisia campestris* var. *wormskioldii*, *Silene spaldingii*, *Sidalcea oregana* var. *calva*, *Hackelia venusta* and *Hackelia taylori.*

Botany (continued)

- Participated in monitoring of other high priority species: *Rorippa columbiae* and *Sisyrinchium sarmentosum.*
- Conducted annual monitoring at Fairchild Air Force Base of vernal pools and Spalding's catchfly (*Silene spaldingii*).
- Conducted field work in the Lime Hill area (extreme southeast corner of the state) and have begun identifying conservation priorities for the area.
- Initiated process to identify conservation priorities and desired outcomes for Lewis County remnant prairies (and the rare plants that occur within them).
- Assisted with training Rare Care volunteers and participated in the Rare Care monitoring weekend.
- Completed Climate Change Vulnerability Index (developed by NatureServe) for 20 rare plant species.



Zoology

- Completed a survey of the Olympic pocket gopher (*Thomomys mazama melanops*) funded by the USFWS. A polygon encompassing all known occurrences and potential habitat is about 200 km2 in size; suitable habitat within that area is far less than 10 km2. Much of the suitable habitat is unoccupied. Gophers have been extirpated at several historical sites and face significant threats at remaining sites.
- Completed a survey for several alpine butterflies in the Olympics funded by the USFS and BLM. Three of the species were found at new locations. They appear to be relatively common and widespread in appropriate alpine meadow habitat. The future of alpine is, however, somewhat in question due to climate change and encroachment of woody vegetation.
- Completed a survey for the least chipmunk (*Tamias minimus*) funded by the Washington Department of Fish and Wildlife. The chipmunk was one of eight target species in a study of habitat connectivity. Less information was available on its distribution than any of the other species, and most of the information was more than 20 years old. Ten new locations were found, but a retreat from lower elevations and southerly locations seems to be continuing.

Olympic Pocket Gopher

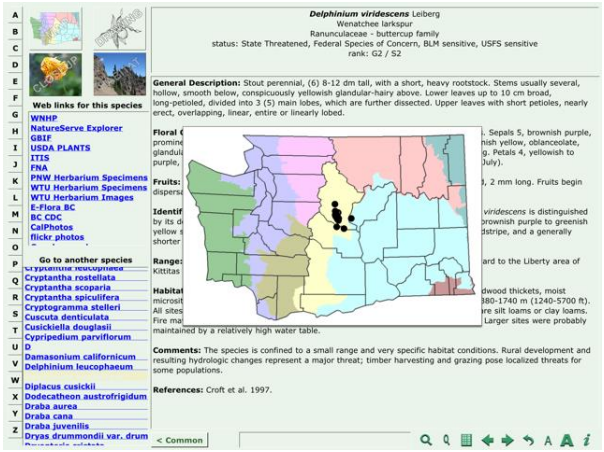
Lupine blue (*Plebejus lupini spangelatus*)

Zoology (continued)

- Continued review of state and range-wide ranks of high priority taxa. Completed review of 22 taxa that were initially ranked G1, T1, or S1 (critically imperiled).

Data Management

- Completed conversion to the Biotics 5 database. The new system for maintaining element and element occurrence data is web-based and uses the current versions of Oracle and ArcGIS. The previous version relied on ArcView 3.3 and Oracle 10g, both of which are outdated, poorly supported, and very difficult to maintain.
- Continuing work on the rare plant field guide app for iOS and Android. The iOS version was essentially done at the end of June, awaiting completion of work on plant status changes. Software and rules for submission to the Apple store have changed and will necessitate additional work. The Android version is nearing completion and will be submitted this spring.



Screen-shot of Rare Plant Mobile App

- Updated the list of rare lichens on the website: http://www1.dnr.wa.gov/nhp/refdesk/lists/lichens.html
- On-going participation in creation of the Washington map for the Western Governors Association Critical Habitat Analysis Tool. Our data are included in this online tool for assessing cross-state development projects. See http://westgovchat.org/
- Replaced old and outdated rare plant descriptions on the website to match those from *Field Guide to the Rare Plants of Washington*. See links from http://www1.dnr.wa.gov/nhp/refdesk/lists/plantrnk.html
- Processed information for approximately 150 occurrences of rare plant species and high quality ecosystems during the last six months. Major data sources for the data processed include USFS, BLM, RareCare, NHP ecologists (wetland ecosystems data generated as part of the EPA project), and a few individual botanists.
- Conducted on-going environmental review of various projects, including those internal to DNR and many that were external (from county planning departments, consulting firms, other agencies, and others).